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EXAMINER

KIM, PAUL D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 05/28/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

EC

Office Action Summary

Application N .

09/975,593

Applicant(s)

CROWDER ET AL.

Examiner

Paul D Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 22-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is a response to the restriction requirement filed on 4/15/2003.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12 and 30, drawn to a disk drive, classified in class 360, subclass 244.6.
 - II. Claims 13-²~~19~~, drawn to a method of assembling an actuator assembly of a disk drive, classified in class 29, subclass 603.03.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions Group II and I are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as depositing a film lubricant upon inner surface of the swage boss.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

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5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. Applicant's election with traverse of Group II, claims 13-29 in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the restriction is not proper and a methods and products are closely related. This is not found persuasive. The product as claimed can be made by another and materially different process such as depositing a film lubricant upon inner surface of the swage boss. Also, these inventions are distinct and have acquired a separate status in the art because of their recognized divergent subject matter and different classification, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore **made FINAL**.

7. If applicant elects Group II, then

III. Claims 13-21, drawn to a method of assembling an actuator assembly of a disk drive, classified in class 29, subclass 603.03.

IV. Claims 22-29, drawn to a method of reducing a torque out retension value between an actuator arm and a suspension arm of a disk drive, classified in class 29, subclass 603.07.

8. Inventions Group III and IV are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other

combinations (MPEP § 806.05(c)). In the instant case, the combination of Group III as claimed does not require the particulars of the subcombination of Group IV as claimed because the combination of Group III as claimed does not require a process of applying a film lubricant inner surface of the swage. The subcombination has separate utility such as applying a film lubricant inner surface of the swage.

9. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

10. During a telephone conversation with Mr. Johnson on 5/7/2003 a provisional election was made with traverse to prosecute the invention of Group III, claims 13-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-29 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

11. Claims 1-12 and 22-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 8.

Information Disclosure Statement

12. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the

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list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

13. The abstract of the disclosure is objected to because the abstract does not sufficiently describe the claimed invention. Correction is required. See MPEP § 608.01(b).

14. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A METHOD OF ASSEMBLING AN ACTUATOR ASSEMBLY OF A DISK DRIVE--.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 13-15 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. (US PAT. 5,879,578) in view of Liu (US PAT. 4,987,975).

Chung et al. teach a method of assembling a disk drive comprising steps of: providing an actuator arm (146) having a proximal end and a distal end; providing a suspension arm (144) having a proximal end and a distal end; fixing a swage plate (160) including a swage boss (162) to the proximal end of the suspension arm as shown in Fig. 4 and 5; applying a lubricant to a swage ball and an inner surface of the boss; and attaching the suspension arm and actuator arm by swaging the swage boss (col. 1, line 54 to col. 2, line 45 and col. 4, lines 11-67).

As per claim 15 Chung et al. teach a process of applying the lubricant by immersing the swage ball into a dilute solution containing the lubricant as disclosed in col. 4, lines 39-53.

However, Chung et al. do not teach a process of depositing a film lubricant upon at least outer surface of the swage boss. Liu teaches a portable automobile grease suction machine including a process of applying a film lubricant, oil film, on a plane of friction so as to reduce the force friction or wearing during a production operation (col. 1, lines 12-25). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify a facilitating process of applying a lubricant to the swage boss of Chung et al. by depositing an oil film on the plane as taught by Liu for the purpose of reducing the force friction or wearing during a production operation.

As per claims 18-21 Chung et al. also teach that the lubricant is a fluorocarbon. Although Chung et al. does not disclose expressly characteristics of the lubricant such as a polymer film, it would have been an obvious matter of

design choice to a person of ordinary skill in the art to modify the lubricant as recited in the claim because applicant has not disclosed that the polymer film is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the fluorocarbon to reduce a friction. Therefore, it would have been an obvious matter of design choice to modify the lubricant of the fluorocarbon to obtain the invention as specified in claims 18-21.

17. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. in view of Liu, and further in view of Fisher et al. (US PAT. 4,215,480).

Chung et al., modified by Liu, teach all of the limitations as set forth above except a process of applying the lubricant by spraying or vacuum deposition. Fisher et al. teach a method of making a measuring instrument including a process of applying a lubricant between surfaces by either spraying or vacuum deposition to give good adhesion between the surfaces (col. 8, lines 63-67). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify a facilitating process of applying a lubricant to the swage boss of Chung et al., modified by Liu, by applying the lubricant to the surfaces by either spraying or vacuum deposition as taught by Fisher et al. for the purpose of optimizing the adhesion between the surfaces.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D Kim whose telephone number is 703-308-8356. The examiner can normally be reached on Tuesday-Friday between 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5648.

pdk
May 13, 2003


**A. DEXTERTUGBANG
PRIMARY EXAMINER**